Summary of the Marbled Murrelet Nesting Meeting, January 21st, 1999

Present:

Tim Max	Diane Evans
Jim Baldwin	Randy Wilkes
Kim Nelson	Ken Ostrom
Sherri Miller	Naomi Bentivoglio

Meeting Overview: We began by reviewing our accomplishments since the last meeting and discussed different data sources for our task. Miles Hemstrom gave us an update on the current vegetation survey and satellite image mapping efforts. They are almost done with the Oregon Coast Range Province. We began talking about various aspects of modeling.

I. Some Topics Covered During Accomplishment Rundown:

The CA Fox Map is based from 1986 data and has no accuracy assessment. They did not perform ground checks but, did low aerial flights in 1988 for proofing. Its unclear whether we'll be able to use it to fill in some blanks. Expect new LANDSAT data set within next 6 months from Larry Fox with FWS.

Naomi and Diane had a conference call with Bill Wettingale (formerly PNW) and Tom Owens from WDFW, addressing the WDFW database problem.   The data set currently has a unique identification for each detection. We need to determine which areas have been surveyed to protocol and determined to be 'absence' sites. Someone from the state, plus Randy, and possibly someone from Tom Hamer's group will provide assistance with updating the database by assigning a number per detection. We'd go back to the 1995-1998 data base. Starting to pull together original data sheets to see if can pull together station /names numbers and will also put into data set. Tom Hamer is looking at 1995-1998 also and doing Oregon and California. He's only going after zeros in OR on Federal land base, not using ODFW database.

II. Discussion Topics:

WADNR has specific ground vegetation data by polygons (not necessarily a stand). Olympic Peninsula 50 polygons, 11 of which are occupied from State data base plus DNR. On the FS Quilcene district, 31 stands with veg data were surveyed for MAMU (20 plots/stand) the findings were averaged for the stand. Looked at moss platform indices etc. 16 occupied, 3 no presence, other 12 indicated presence. This is most specific tie of veg to MAMU surveys. Can also show stations.   Doesn't include Tom H. or Bill Ritchie data. Need to make more inquiries.

Diane mentioned WA state would digitize info of bird locations from the data sheets they received. Are they to use bird site or the station geometric center?

Ralph Warbington (R5, CA) would be willing to gather additional information for Mamu. We need to be specific so they can add it. Ken will pursue this.

III. Miles Hemstrom, Update:

Developing maps using Forest Service current vegetation survey plots, forest inventory assessment plots, Bureau of Land Management plots, and satellite images. Getting: 1) total vegetation cover; 2) percent canopy cover (percent canopy conifer and non conifer); 3) quadratic mean diameter for the dominants and codominants lumped together; and 4) canopy structure (simple versus complex).

Combined dominant and codominat trees consists of the upper 25 or 30% of the height distribution of the stand. If they don't have the DBH recorded, use the top 25 or 30% of the diameters (upper quartile of the largest trees). When not enough remnants trees are available to separate out into a class, they are absorbed into the upper most class. The remote sensing won't be able to detect small numbers of remnants in the imagery, nor would the data reflect many. If there are enough of them they will be captured by their DBH. If there aren't enough of them, wouldn't show up anyway.

The LSOG schedule is undetermined and no one has assigned any people or resources to do this.

Maps are due as follows: Oregon Coast Range-Feb 99, Oregon Cascades-Spring 99, Olympic Peninsula-Mid Summer 99, Western WA Cascades-Fall 99, Southwest Oregon/CA Klamath-Winter 99, then either Western WA lowlands or East side Cascades in OR/WA last. The Olympic peninsula was delayed while waiting for photos.

How do you feel about these products? R square is about .7, not bad. Doesn't think would be used on a watershed level. High and low ends are not as good since based on fewer plots.

Structure will be done for all. Is based on Tom Spies index but doesn't think the index need be recalculated for each area.

CA or R5 classification is currently being worked on. The Process: begin with TM image and splits into classes first. Divided into polygons, not pixels. Spend a lot of time and money doing this. They have veg strike team standards but are different in CA vs OR/WA. Should be out in Feb or March.

When data is available, a CD will contain the pixel maps and veg standardized maps. Computer systems will need about 30 gigabytes of hard drive space per province. Text file will accompany with equations and fit of regressions. 25% of reserved accuracy assessment plots will also be provided.

IV. Modeling:

Use vs Available Discussion:
Landscape (all forest habitats)
Large DBH conifer classes

Discussion of scale. Our 400m circle that we discussed at the last meeting would be 125 acres, 50 hectares. A pixel is 25m x 25meters. 200m radius is 13 hectares. The way we choose the area of the use site and available site will effect the outcome. Could do summary statistics on the use sites and compare to summary statistics of the available sites of circles. Or could do average stats. Or could percent of circle that is "very large conifer".

Scales 2 things possible:
1. pixel level
2. some other defined level (400m circle)

Any scale could be chosen for the reference populations and then would be applied to the random (available) population.

Use vs Absence Discussion:
Discussion of maps versus quantitative assessments. Quant assess. will be much more precise than mapping. Tim not very optimistic about the mapping effort being accurate enough to be useful. But we think we need a map. Kims map was not a model. Independent variables explain use.

The map we produce would show similar areas to known areas which birds are using. Will produce a 'Similarity' or 'probability map' and NOT a habitat map. Note have to be careful how we present that. May end up with use types I and II for two different forest types for example. This may help our predictability.

2 Basic Modeling Components: Use vs Availability and Use vs Non Use

The following will need to be discussed for each:
Basic model form (logistic regression)
clear expectations of what is possible for models
independent variables
issue of scale
reference population
variable selection

V. To Do List:

1. Jim will work on SAS and SPSS.

2. Ken to acquire the R5 CVS data and plot locations for Sherri. Seek FIA plot location info for Fed lands and whatever else available.

3. Ken will send copies of the CVS manual and MM collection guide out folks when available.

4. Need to coordinate the MM data collection (% moss, # platforms, etc) for the CA FS VEG or FIA inventory. Will give Ralph what Teply (R6) is doing. May need Kim or Tom H. along with John Teply to meet with CA folks and contractor to get started on the right foot. Possibly include FIA folks.

5. Ken will talk to Brian Schwind in CA will know. He'll talk to Sherri. Ken thinks that March expect to have 6 Rivers. Bill Hogoboom 825-2983, GIS guy in Sherri's lab needs to know this stuff.

6. Kim will contact Janet Oman. Comparing survey data with the ground plot data. Will work with ODFW survey info to produce a GIS product?

7. Kim will still need to take the data (station #s) and turn them back into a site. When will she do it? Not first priority.

8. Sherri will check to see if she can find the original data forms to turn the CA station data into a site format.

9. Diane will revise proposal to get started on clean up of Washington database.

10. Diane will investigate the accuracy of the Olympic National Forest Service TRI model of fire history, plant associations, soil types. Also look into the availability for the Mt Baker Snoqualmie.

11. Naomi will call Tom Hamer to see if the OR data base will help with getting the Washington database into a useable format for us. Kim will call Greg Sieglitz to assess OR data base if needed.

12. Sherri will call Esther. Couldn't find any info. Should be presence absence, occupancy. Will try Gorden Gould, CDFG.

13.Naomi will contact Miles H about a write-up for his procedure.

Next meeting will be February 8, 1999, in the Cowlitz Room (7ᵗʰ floor, Duncan Plaza Bldg.). Will talk about <u>modeling</u> in detail. Start at 9:15.